

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



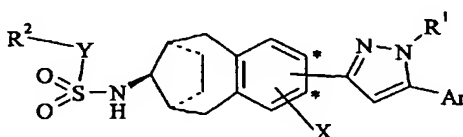
(43) International Publication Date  
13 May 2004 (13.05.2004)

PCT

(10) International Publication Number  
**WO 2004/039370 A1**

- (51) International Patent Classification<sup>7</sup>: **A61K 31/415**, C07D 231/12, 401/12, 409/12, 417/12, A61P 25/28
- (21) International Application Number: PCT/GB2003/004707
- (22) International Filing Date: 29 October 2003 (29.10.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 0225474.6 1 November 2002 (01.11.2002) GB
- (71) Applicant (for all designated States except US): **MERCK SHARP & DOHME LIMITED** [GB/GB]; Hertford Road, Hoddesdon, Hertfordshire EN11 9BU (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **MADIN, Andrew** [GB/GB]; Terlings Park, Eastwick Road, Harlow, Essex CM20 2QR (GB). **RIDGILL, Mark, Peter** [GB/GB]; Terlings Park, Eastwick Road, Harlow, Essex CM20 2QR (GB).
- (74) Agent: **BUCHAN, Gavin, MacNicol**; Merck & Co., Inc., European Patent Department, Terlings Park, Eastwick Road, Harlow, Essex CM20 2QR (GB).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**  
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SULFONAMIDES, SULFAMATES AND SULFAMIDES AS GAMMA-SECRETASE INHIBITORS



(I)

(57) Abstract: Compounds of formula I inhibit the processing of APP by gamma-secretase, and hence are useful in treating or preventing Alzheimer's disease.